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EXAMINER	
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ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/570,930	AUF DER HEIDE ET AL.	
	Examiner	Art Unit	
	MICHELE JACOBSON	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10, 12 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/8/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Withdrawn Rejections

1. Applicant's amendment to claim 12 has been deemed sufficient to overcome the rejection under 35 USC 101/112 set forth in the previous office action and this rejection has therefore been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10, 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended claim 1 and new claim 13 recite values of surface energy with units of dyn/cm. Applicant has submitted on page 6 of the remarks filed 8/28/08 that support for these values of surface energy can be found in applicant's specification on pg. 3, lines 10-15. Applicant has further asserted that "subject matter of the claim need not be described using the exact same terms *in haec verba*" according to MPEP 2163.02. While the subject matter claimed need not be described literally, surface tension is not a synonym for surface energy. Applicant has

changed the units for the values of surface tension recited in the specification from dyn/cm^2 to dyn/cm and asserted they are therefore values of not surface tension but instead surface energy. Applicant has provided no rationale for this substitution, has not provided any arguments to show that surface tension and surface energy are the same thing and therefore can be converted in a 1:1 proportion. Applicant's assertion that the recitation of a unit of energy and that the layer is "very readily wettable" is not found persuasive to evidence that applicant was in possession of the invention with the claimed surface energies. Applicant's amendments to claim 1 and submission of new claim 13 therefore constitute new matter. Claims 2-10 and 12 are rejected for being dependent from unsupported claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, 4-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krallman et al. U.S. Patent Application Publication No. 2003/0059502 (hereafter referred to as Krallman) and Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger) and Ramesh et al. U.S. Patent No. 6,221,410 (hereafter referred to as Ramesh).

6. Krallman teaches a smoke-impregnated at least three-layer tubular film with a polyamide inner and outer layer that gives the finished sausage a smoke flavor. (Para. 13, 26) The casing may be biaxially oriented and shrinkable. (Para. 14) The liquid smoke emulsion that is coated on the inside of the tubular casing is recited to comprise liquid smoke, browning agents and optionally water. (Para. 16-20) The mixture is recited to be applied to the interior surface of the tubular casing using the art-recognized bubble technique. (Para. 30) Useful polyamides for the layers of the invention are recited to be nylon 6 and partially aromatic copolyamide. (Para. 41)

7. Krallman is silent regarding the water vapor permeability of the polyamide layers, and the thickness of the polyamide films.

8. Stenger et al. teaches a polyamide single layer sausage casings composed of nylon 6 having a thickness of 39-41 μm and a water vapor permeability of 20 g/m^2/day. (Table 1) Stenger also recites that sausage casings with too high of a water vapor permeability lead to undesirable weight losses and drying of the sausage. (Col. 1, lines 60-64)

9. Krallman and Stenger both teach polyamide sausage casings comprising Nylon 6. As evidenced by Stenger, the polyamide sausage casing of Krallman would be expected to exhibit a water vapor permeability of 20 g/m^2/day and likely less since the casing of Krallman would be comprised of two layers of polyamide.

10. The casing recited by Krallman would inherently have a water vapor permeability of 20 g/m^2/day and likely less as evidenced by Stenger. Although Krallman recites that the composition impregnating the polyamide sausage casing of the invention should

include a browning agent, it would have been obvious to one having ordinary skill in the art at the time the invention was made to deleted the browning agent from the solution in order to lower costs by requiring less materials and to provide a sausage that would be more desirable to an environmentally conscious consumer who prefers food containing fewer synthetic materials. Additionally, since both Krallman and Stenger are directed towards sausage casings it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized polyamide films of the thickness recited by Stenger (about 40 μm) to produce the sausage casing recited by Krallman because these thickness were known in the art to be useful.

11. Ramesh teaches that it is known that a polar surface is needed for adhesion of a film to a meat product. Adhesion of the film to the meat is frequently needed in order to prevent "purge", i.e., "cook-out", which can occur during the cooking of the meat packaged in the film if the film does adhere to the meat during cook-in. A polar film surface can be provided by using: (a) polar resin in the film layer in contact with the meat, and/or (b) surface modification, such as corona treatment, of the film surface in contact with the meat. Typically, polar polymers used for meat adhesion include: ethylene/unsaturated acid copolymer, anhydride-containing polyolefin, and polyamide. (Col. 2, lines 13-24)

12. Krallman, Stenger and Ramesh are all directed towards sausage casings. Ramesh evidences that it was well known in the sausage casing art that the interior of sausage casing needs to have a high adhesion to the meat encased. It would have been obvious to one having ordinary skill in the art at the time the invention was made

to have corona treated the interior surface, as taught by Ramesh, of the polyamide sausage casing produced by the combination of Krallman with Stenger in order to produce a casing with improved meat adhesion properties in addition to the adhesion provided by the use of a polar polymer. Corona treatment of the invention recited by Krallman produced with the obvious deletion of the browning agent would have produced the invention as claimed in claims 1, 2, 4-10 and 12.

13. Regarding the values of surface energy recited in claims 1 and 2: Corona treating as recited by Ramesh would have inherently produced a polyamide sausage casing with surface energy values such as those recited in claims 1, 2 and 13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of corona treatment in order to obtain the most beneficial properties of adhesion. Such an optimization would have resulted in a casing such as claimed in claims 1, 2.

14. Regarding claims 5: It is well known in the sausage casing art to produce seamless polyamide casings. The liquid smoke material recited by Krallman is applied to the sausage casing in tubular form, therefore it would have been obvious to one of ordinary skill in the art to have utilized either a seamed or seamless polyamide casing for the invention of Krallman. Production of the corona treated invention of Krallman utilizing a seamless polyamide casing would have produced the invention as claimed in claim 5.

15. Regarding claims 6 and 7: Krallman recites that the sausage casing of the invention can be biaxially oriented and is shrinkable. It is well known in the sausage are

to heat set shrinkable films and to minimize the residual shrinkage thereof. The optimization of the corona treated invention of Krallman according to these well known properties would have produced the invention as claimed in claims 6 and 7.

16. Regarding claim 9: Krallman recites a multilayer polyamide casing whereas Stenger recites a single layer polyamide sausage casing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have produced the invention of Krallman utilizing only the interior liquid smoke impregnated polyamide layer recited by Krallman since the utility of a single layer casing is taught by Stenger. Production of the invention of Krallman using only a single polyamide layer with a thickness as recited by Stenger would have minimized production costs by requiring less material and would have greatly simplified the production process by rendering unnecessary the additional steps required to make a multilayer film. Production of the corona treated invention of Krallman using an approximately 40 μm thick liquid smoke impregnated polyamide film would have produced the sausage casing as claimed in claim 9.

17. Regarding claims 11 and 12: Krallman and Stenger clearly recite using the polyamide casings recited for packaging sausage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have packaged any sausage within the casing produced by the combination of Krallman with the teachings of Stenger such as those claimed in claim 12.

18. The biaxially stretched and shrinkable polyamide multilayer sausage casing invention of Krallman produced by deletion of the browning agent recited and corona

treated as taught by the prior art would have produced the sausage casing as recited in claims 1, 2, 4- 7 and 9-12.

19. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krallman et al. U.S. Patent Application Publication No. 2003/0059502 (hereafter referred to as Krallman) and Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger) and Ramesh et al. U.S. Patent No. 6,221,410 (hereafter referred to as Ramesh) and Erk et al. U.S. Patent No. 4,897,295 (hereafter referred to as Erk).

20. Krallman, Stenger and Ramesh teach what has been recited above but are silent regarding the swelling value of the polyamide inner layer of the casing.

21. Erk teaches polyamide sausage casings containing at least one polyamide which can absorb at least 5% of their own weight in water prior to saturation. (Col. 3, lines 5-10) A sausage casing that is treated with water prior to filling avoids the problems of the need for additional lubricating agent and provides a casing that can be filled to a constant diameter and that can be tied off and clipped without error and without any loss and so that the filled casings display no visible tightening folds. (Col. 2, line 65-Col. 3, line 2) It is particularly preferred that the casing consists of at least one of the polyamides 6, 6.6 or a mixture of PA-6 and PA 6.6. (Col. 4, lines 46-50) The casings produced are recited to have thicknesses between 25 to 100 µm. (Col. 5, lines 19-22)

22. As evidenced by Erk, casings comprising Nylon 6 layers will have a swelling value of greater than 5 %. As such, the casing produced by the combination of

Krallman, Stenger and Ramesh would have had a swelling value of greater than 5% for the nylon 6 interior layer of the casing as recited in claim 3.

Response to Arguments

23. Applicant's arguments filed 8/28/08 have been fully considered but they are not persuasive. Applicant's argument's presented on page 6 of the remarks regarding the rejection of claims 1-12 under 35 USC 112 set forth in the previous office action have been considered but not found persuasive for the reason enumerated above.

24. Applicant has asserted on pages 8 and 9 of the remarks that there is no recitation in Krallman to suggest the deletion of the browning agent recited and that it would not have been obvious to do so because of Krallman's required 5 day soaking period. However, applicant has not provided evidence or arguments to show that the browning agent recited by Krallman is necessary for the sausage casing recited to function and that its absence would render the 5 day soaking period inoperable when used for liquid smoke alone.

25. Applicant has asserted on page 9 of the remarks that to alter Krallman "so as to avoid its required browning agent would alter its stated principle of operation, which clearly indicates that the required browning agent results in an increased depth of smoke flavor penetration". Krallman recites that the mixture of liquid smoke and browning agent results in an increased depth of smoke flavor penetration. Since liquid smoke and browning agents accomplish the same purpose of providing color and flavor to sausage, there is no reason to believe that liquid smoke alone would not accomplish

increasing the depth of smoke flavor penetration in the invention of Krallman. Applicant has failed to provide evidence or compelling arguments that the browning agent recited by Krallman is solely responsible for the increased depth of smoke flavor penetration asserted by applicant to be a main feature of the invention of Krallman. As stated in MPEP 2144.04 II. "Omission of an element and its function is obvious if the function of the element is not desired". Applicant has failed to refute the motivation for the deletion of this element as set forth in the previous office action.

26. Applicant has asserted on page 9 of the remarks that Stenger is not relevant because it does not disclose all the elements of the presently claimed invention. However, note that while Stenger do not disclose all the features of the present claimed invention, Stenger is used as teaching/evidentiary reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, that casings made of single layers of PA6 exhibit a water vapor permeability of 20 $g/m^2/day$ and in combination with the primary reference, evidences the property of the water vapor permeability of the presently claimed invention.

27. In response to applicant's argument on page 11 of the remarks that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Stenger is not used in combination with Krallman but instead to evidence the inherent water vapor permeability properties of the casing of Krallman. Applicant has asserted that because these references are concerned with solving different problems there would be no motivation to combine. However, the argument is spurious in that the test for analogous art does not require that the references be solely concerned with solving the same problems. Applicant has failed to present arguments directed towards refuting the motivation to combine clearly stated in the previous office action and therefore applicant's assertion that there would have been not motivation to combine is not found persuasive.

28. Applicant asserts on page 11 that the combination of Krallman and Stenger fails to teach all the features of the claimed invention. This argument is not germane in light of the new rejections set forth above in response to applicant's amendment.

29. Applicant has asserted on page 12 of the remarks that Erk is not relevant because it does not disclose all the elements of the presently claimed invention. However, note that while Erk do not disclose all the features of the present claimed invention, Erk is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, casings comprising Nylon 6 layers will have a swelling value of greater than 5

% and in combination with the primary reference, evidences the swelling value of the presently claimed invention.

30. Applicant has asserted on page 12 of the remarks that because Krallman, Stenger and Erk are concerned with solving different problems there would be no motivation to combine. However, the argument is spurious in that the test for analogous art does not require that the references be solely concerned with solving the same problems. Applicant has failed to present arguments directed towards refuting the motivation to combine clearly stated in the previous office action and therefore applicant's assertion that there would have been not motivation to combine is not found persuasive.

31. Applicant has asserted on page 13 of the remarks that Ramesh is not relevant because it does not disclose all the elements of the presently claimed invention. However, note that while Ramesh does not disclose all the features of the present claimed invention, Ramesh is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, that is was well known in the sausage casing art that the interior of sausage casing needs to have a high adhesion to the meat encased which could be accomplished by corona treatment and in combination with the other references, discloses the presently claimed invention.

32. Applicant has asserted on page 12 of the remarks that because Krallman, Stenger and Ramesh are concerned with solving different problems there would be no motivation to combine. However, the argument is spurious in that the test for analogous art does not require that the references be solely concerned with solving the same problems. Applicant has failed to present arguments directed towards refuting the motivation to combine clearly stated in the previous office action and therefore applicant's assertion that there would have been not motivation to combine is not found persuasive.

Conclusion

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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